

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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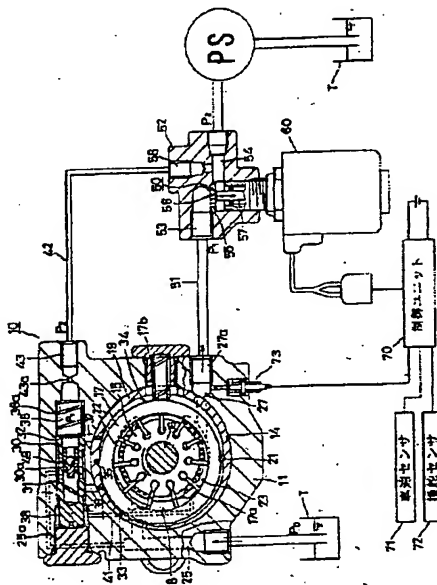
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TITLE : CONTROLLER FOR VARIABLE  
DISPLACEMENT PUMP FOR POWER  
STEERING GEAR



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**ABSTRACT :** PROBLEM TO BE SOLVED: To provide required steering assisting force by a power steering gear, by drive-controlling a variable displacement pump having an energy saving effect in response to a traveling condition such as a vehicle speed, a steering condition and an operation condition in a power steering gear side.

**SOLUTION:** The variable displacement pump 10 is provided to make a cam ring 17 movedly displaced to a direction increasing or decreasing a pumping displacement in a pump chamber 18 by a fluid pressure difference between fluids in the first and second fluid pressure chambers 33, 34 in moving-directional both sides. Metering restrictions 50 for controlling fluid pressures of the respective fluid pressure chambers are provided in delivery side passages 27, 51 for connecting the pump chambers to the power steering gear PS. There are provided a solenoid 60 for controlling a contraction amount in the metering restriction and an electronic control means 70 for drive- controlling it. A vehicle speed sensor 71 for detecting the traveling speed of a vehicle, a steering sensor 72 for detecting the steering condition, and a pressure sensor 73 for detecting the fluid pressures in the delivery side passages 27, 51 are provided to drive-control the solenoid by the electronic control means in response to signals from the respective sensors.

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